UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/824,939	04/15/2004	Gerald R. Crabtree	SUPP-P01-007	7564

28120 7590 12/12/2005

FISH & NEAVE IP GROUP
ROPES & GRAY LLP
ONE INTERNATIONAL PLACE
BOSTON, MA 02110-2624

EXAMINER	
BOWMAN, AMY HUDSON	
ART UNIT	**PAPER NUMBER**
1635	

DATE MAILED: 12/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/824,939	CRABTREE ET AL.	
	Examiner	Art Unit	
	Amy H. Bowman	1635	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 April 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-19* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) _____ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☒ Claim(s) *1-19* are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

Restriction to one of the following inventions is required under 35 U.S.C. 121:

I. Claim 2, drawn to a method for promoting axonal growth comprising treating a neuron with an NF-AT agonist, wherein the agonist interacts with calcineurin and increases the dephosphorylation of NF-AT, classified in class 514, subclass 44.

II. Claim 3, drawn to a method for promoting axonal growth comprising treating a neuron with an NF-AT agonist, wherein the agonist binds NF-AT and increases its nuclear localization, classified in class 514, subclass 44.

III. Claim 4, drawn to a method for promoting axonal growth comprising treating a neuron with an NF-AT agonist, wherein the agonist is calcineurin or an agent that upregulates the expression of calcineurin, classified in class 514, subclass 44.

IV. Claims 5 and 6, drawn to a method for promoting axonal growth comprising treating a neuron with an NF-AT agonist, wherein the agonist is an inhibitor of GSK-3, wherein the agonist is more specifically a RNAi molecule that inhibits the expression of GSK-3, classified in class 514, subclass 44.

V. Claims 5 and 6, drawn to a method for promoting axonal growth comprising treating a neuron with an NF-AT agonist, wherein the agonist is an inhibitor of GSK-3, wherein the agonist is more specifically a

ribozyme that inhibits the expression of GSK-3, classified in class 514, subclass 44.

VI. Claims 5 and 6, drawn to a method for promoting axonal growth comprising treating a neuron with an NF-AT agonist, wherein the agonist is an inhibitor of GSK-3, wherein the agonist is more specifically a DNA enzyme that inhibits the expression of GSK-3, classified in class 514, subclass 44.

VII. Claim 7, drawn to a method for promoting axonal growth comprising treating a neuron with an NF-AT agonist and another agent, classified in class 514, subclass 44. **Election of this group requires further election of a single species as explained below.**

VIII. Claim 8, drawn to a method for promoting axonal growth comprising administering an NF-AT agonist in a biodegradable nerve conduit, classified in class 514, subclass 44.

IX. Claim 9, drawn to a method to activate NF-AT dependent gene transcription comprising the use or a netrin or a neurotrophin, classified in class 514, subclass 44.

X. Claims 10 and 11, drawn to a method to induce regeneration of neurons comprising treating said neurons with an NF-AT agonist, wherein the agonist enhances expression of NF-AT, classified in class 514, subclass 44.

XI. Claim 12, drawn to a pharmaceutical composition comprising a NF-AT agonist and a pharmaceutically acceptable carrier, classified in class 536, subclass 24.5.

XII. Claim 13, drawn to a method of identifying a compound that is an NF-AT agonist and promotes axonal growth comprising determining the location of NF-AT within the cell, classified in class 514, subclass 44.

XIII. Claim 14, drawn to a method of identifying a compound that is an NF-AT agonist and promotes axonal growth, comprising determining the phosphorylation state of NF-AT, classified in class 514, subclass 44.

XIV. Claims 15 and 16, drawn to a method of identifying a compound that is an NF-AT agonist and promotes axonal growth, comprising contacting NF-AT with a phosphatase, wherein the phosphatase is calcineurin, classified in class 514, subclass 44.

XV. Claims 17 and 18, drawn to a method of identifying a compound that is an NF-AT agonist and promotes axonal growth, comprising contacting NF-AT with a kinase, wherein the kinase is GSK-3, classified in class 514, subclass 44.

XVI. Claim 19, drawn to a method of determining whether a compound is an NF-AT agonist, classified in class 514, subclass 44.

The inventions are distinct, each from the other because of the following reasons:

The inventions of groups I-VII are each unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the inventions of groups I-VII have not been disclosed as capable of use together and have different modes of operation. Each of the groups are drawn to separate and distinct methods, based on the agent used to carry out the method. Each of the NF-AT agonists are separate and distinct, each acting through different mechanisms. Each of the recited methods comprise separate and distinct structural components, each requiring a unique search and examination. To search for one of the methods would not necessarily return art for any other of the methods. Therefore, to search more than one of the instantly claimed methods presents a search burden.

The inventions of groups I-VII are each unrelated to the invention of group VIII. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the inventions of groups I-VII have not been disclosed as capable of use together and have different modes of operation than the invention of group VIII. Each of the groups are drawn to separate and distinct methods, based on the agent used to carry out the method. Each of the NF-AT agonists are separate and distinct, each acting through different mechanisms. None of the methods of groups I-VIII involve administration of an agonist in a biodegradable nerve conduit. Each of the recited methods comprise separate and

distinct structural components, each requiring a unique search and examination. To search for one of the methods would not necessarily return art for any other of the methods. Therefore, to search more than one of the instantly claimed methods presents a search burden.

The inventions of groups I-VIII are each unrelated to the inventions of groups IX, X, and XII-XVI. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the inventions of groups I-VIII have not been disclosed as capable of use together and have different effects than the methods of groups IX, X, and XII-XVI. The methods of groups I-VIII are drawn to promoting axonal growth comprising various method steps, whereas groups IX, X, and XII-XVI are drawn to unrelated methods, each comprising separate and distinct method steps. The methods have not been disclosed as capable of use together and have different effects based on their distinct method steps. To search for one of the methods would not necessarily return art for any other of the methods. Therefore, to search more than one of the instantly claimed methods presents a search burden.

The invention of groups I-VIII are related to the invention of group XI as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the

instant case the product agonist of group XI can be used to screen for NF-AT, rather than promoting axonal growth as present in groups I-VIII. To search for one of the methods of groups I-VIII would not necessarily return art against the composition of group XI. To search both inventions in the same application presents a search burden.

The inventions of groups IX, X and XVI are each unrelated to the inventions of groups XII-XV. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the inventions of groups IX, X and XVI have not been disclosed as capable of use together and have different effects than the methods of groups XII-XV. The methods of groups IX, X and XVI are drawn to methods that do not involve identifying compounds that are NF-AT agonists and promote axonal growth, as present in the methods of groups XII-XV. The methods have not been disclosed as capable of use together and have different effects based on their distinct method steps. To search for one of the methods would not necessarily return art for any other of the methods. Therefore, to search more than one of the instantly claimed methods presents a search burden.

The inventions of groups IX, X and XVI are each unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the inventions of groups IX, X and XVI have not been disclosed as capable of use together and have different effects. The methods of groups IX, X and XVI are each drawn to a separate and distinct method,

each comprising separate and distinct steps. The methods have not been disclosed as capable of use together and have different effects based on their distinct method steps. To search for one of the methods would not necessarily return art for any other of the methods. Therefore, to search more than one of the instantly claimed methods presents a search burden.

The inventions of groups XII-XV are each unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the inventions of groups XII-XV have not been disclosed as capable of use together and have different modes of operation. The methods of groups XII-XV are each drawn to a separate and distinct method, each comprising separate and distinct steps. The methods have not been disclosed as capable of use together and have different modes of operation defined by their distinct method steps. To search for one of the methods would not necessarily return art for any other of the methods. Therefore, to search more than one of the instantly claimed methods presents a search burden.

The inventions of groups IX, X, and XII-XVI are each unrelated to the invention of group XI. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the inventions of groups IX, X, and XII-XVI have not been disclosed as capable of use together and have different functions than the invention of group XI. The methods of groups IX, X,

and XII-XVI do not involve the pharmaceutical composition of group XI. The methods have not been disclosed as capable of use together with the composition and have different functions than the pharmaceutical composition. To search for any one of the methods would not necessarily return art for the unrelated pharmaceutical composition. Therefore, to search more than one of the instantly claimed methods presents a search burden.

Because the inventions are distinct for the reasons given above and because a search for art against one group would not necessarily return art against another, restriction for examination purposes as indicated is proper.

The examiner has required restriction between product and process claims. Where applicant elects claims directed to the product, and a product claim is subsequently found allowable, withdrawn process claims that depend from or otherwise include all the limitations of the allowable product claim will be rejoined in accordance with the provisions of MPEP § 821.04. **Process claims that depend from or otherwise include all the limitations of the patentable product** will be entered as a matter of right if the amendment is presented prior to final rejection or allowance, whichever is earlier. Amendments submitted after final rejection are governed by 37 CFR 1.116; amendments submitted after allowance are governed by 37 CFR 1.312.

In the event of rejoinder, the requirement for restriction between the product claims and the rejoined process claims will be withdrawn, and the rejoined process claims will be fully examined for patentability in accordance with 37 CFR 1.104. Thus, to be allowable,

the rejoined claims must meet all criteria for patentability including the requirements of 35 U.S.C. 101, 102, 103, and 112. Until an elected product claim is found allowable, an otherwise proper restriction requirement between product claims and process claims may be maintained. Withdrawn process claims that are not commensurate in scope with an allowed product claim will not be rejoined. See "Guidance on Treatment of Product and Process Claims in light of *In re Ochiai, In re Brouwer* and 35 U.S.C. § 103(b)," 1184 O.G. 86 (March 26, 1996). Additionally, in order to retain the right to rejoinder in accordance with the above policy, Applicant is advised that the process claims should be amended during prosecution either to maintain dependency on the product claims or to otherwise include the limitations of the product claims. **Failure to do so may result in a loss of the right to rejoinder.**

Further, note that the prohibition against double patenting rejections of 35 U.S.C. 121 does not apply where the restriction requirement is withdrawn by the examiner before the patent issues. See MPEP § 804.01.

Claim 1 links the inventions of groups I-VI. The restriction requirement among the linked inventions is subject to the nonallowance of the linking claim(s), claim 1. Upon allowance of the linking claim(s), the restriction requirement as to the linked inventions shall be withdrawn and any claims(s) depending from or otherwise including all the limitations of the allowable linking claim(s) will be entitled to examination in the instant application. Applicant(s) are advised that if any such claim(s) is/are presented in a continuation or divisional application may be subject to provisional statutory and/or

nonstatutory double patenting rejections over the claims of the instant application. Where a restriction requirement is withdrawn, the provisions of 35 U.S.C 121 are no longer applicable. *In re Ziegler*, 44 F.2d 1211, 1215, 170 USPQ 129, 131-32 (CCPA 1971). See also MPEP § 804.01.

Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement may be traversed (37 CFR 1.143).

Claim 7 is directed the following patentably distinct species of the claimed invention: a neurotrophic factor, a neuropoietic factor, inosine, a fibroblast growth factor, an insulin-like growth factor, a platelet-derived growth factor, an anti-inflammatory, anti-NGF, anti-BDNF, anti-IGF-I, transforming growth factor-beta 1, other agents that increase production of inducible-nitric oxide synthase (i-NOS), an activator of macrophages, LPS, indomethacin, and a leukemia inhibitory factor (LIF).
Each of the claimed agents are separate and distinct, sharing no common structure.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim

is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

Conclusion

Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement may be traversed (37 CFR 1.143).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amy H. Bowman whose telephone number is 571-272-0755.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Wang can be reached on 571-272-0811. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Patent applicants with problems or questions regarding electronic images that can be viewed in the Patent Application Information Retrieval system (PAIR) can now contact the USPTO's Patent Electronic Business Center (Patent EBC) for assistance. Representatives are available to answer your questions daily from 6 am to midnight (EST). The toll free number is (866) 217-9197. When calling please have your application serial or patent number, the type of document you are having an image problem with, the number of pages and the specific nature of the problem. The Patent Electronic Business Center will notify applicants of the resolution of the problem within 5-7 business days. Applicants can also check PAIR to confirm that the problem has been corrected. The USPTO's Patent Electronic Business Center is a complete service center supporting all patent business on the Internet. The USPTO's PAIR system provides Internet-based access to patent application status and history information. It also enables applicants to view the scanned images of their own application file folder(s) as well as general patent information available to the public. For more information about the PAIR system, see http://pair-direct.uspto.gov.

For all other customer support, please call the USPTO Call Center (UCC) at 800-786-9199.

Amy H. Bowman
Examiner
Art Unit 1635

J.D. SCHULTZ, Ph.D.
PATENT EXAMINER